

### REMARKS

The Applicants have added new claims 21-31. Claims 1-31 are pending, with claims 1, 18, 19, 21, and 22 being in independent form. Support for the amendments can be found, for example, at page 5, line 36 to page 6, line 5; page 6, lines 18-22 of the specification. No new matter has been added.

The Examiner has rejected claims 4 and 15-17 under 35 U.S.C. § 112, second paragraph. Applicants have amended claims 4 and 15-17 to address the Examiner's concerns. Therefore, withdrawal of the objection is respectfully requested.

The Examiner has rejected claims 1-20 under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,391,277 ("El Kadi"); S.U. Patent Publication No. 430060 ("Moscow Steel"); B.R. Patent Publication No. 9701866 ("Gomes"); or Steven F. McGrath & Lawrence C. Farrar, *Sonochemical Technology for Processing Bauxite*, JOM, May 1998, at 34 ("McGrath"). Withdrawal of the section 103 rejections and reconsideration of the claims is respectfully requested.

Claims 1, 18, 19, 21, and 22 recite a Bayer process including treating... with ultrasonic energy to destroy organics. Neither El Kadi, Moscow Steel, Gomes, nor McGrath describe or suggest at least this feature.

Each of El Kadi, Moscow Steel, Gomes, and McGrath describe uses for ultrasonic energy in a Bayer process. For example, Kadi '277 describes using ultrasonic energy to promote formation of seed particles. Moscow Steel describes using ultrasonic energy to facilitate removal of silica. Gomes describes using ultrasonic energy to agitate bauxite particles to facilitate decomposition of bauxite and to improve settling of solids from solution. McGrath describes using ultrasonic energy to promote mixing that accelerates leaching of aluminium trihydrate from bauxite. None of the references discloses or suggests using ultrasonic energy to destroy organics.

The office action asserts that absent a showing to the contrary, the processes of treating with ultrasonic energy described in El Kadi, Moscow Steel, Gomes, and McGrath would result in the destruction of organics. However, according to the claims, process conditions involving the use of ultrasonic energy are selected that destroy organics, and there is no description or

suggestion that this result would be achieved by any one or more of the processes described in the applied documents. It is relevant to note that organics are a major contaminant in the Bayer process and a long-standing problem that has not been solved satisfactorily notwithstanding significant research and development by the industry. The applied documents propose the use of ultrasonic energy for a range of different purposes but do not recognize that ultrasonic energy is a solution to the long-standing problem of organics. The applied documents do not disclose the selection of process conditions that destroy organics.

For at least these reasons, Applicants submit that claims 1, 18, 19, 21, and 22 and their dependent claims are patentable over El Kadi, Moscow Steel, Gomes, and McGrath. Therefore, withdrawal of the section 103 rejection of claim 1 and its dependent claims is respectfully requested.

In conclusion, the Applicants do not acquiesce to the Examiner's characterizations of the art, and reserve the right to address the characterizations of the art in further prosecution of this or a subsequent application. The absence of an explicit response by the Applicants to any of the examiner's positions does not constitute a concession of the examiner's positions.

Pursuant to 37 CFR §1.136, Applicants hereby petition that the period for response be extended for three months to and including April 14, 2010.


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The fee in the amount of \$1110.00 in payment of the three-month extension of time fee and the fee in the amount of \$1012.00 in payment of the excess claims fee are being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any charges not otherwise paid, or apply any credits to deposit account 06 1050.

Respectfully submitted,

Date: April 14, 2010

  
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